

REMARKS

Applicants thank the Examiner for examining the application, and for indicating that claim 8 is allowable as is, and that claims 1-7, and 19-20 would be allowable if the § 112 ¶ 2 rejection is overcome, and that claims 11-17 would also be allowable if the § 112 ¶ 2 rejection is overcome and the claims are re-written to include the limitations of the base claims and any intervening claims. Applicants have amended claims 1-5, 9-11, 14-17, and 19-20 as described further below. Applicants have also amended claim 19 to further characterize that the claimed method is performed by the computer system in the computer system according to the computer program product. Support for these amendments may be found throughout the specification, and these amendments do not constitute adding new matter. With the amendments, claims 1-7 and 9-20 are pending.

Claim Rejections – 35 U.S.C. § 112 ¶2

The Examiner rejected claims 1-7, 9-17, and 19-20 under 35 U.S.C. § 112 ¶ 2 as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Specifically, the Examiner rejected claims 1-7, 9-17, and 19-20 for usage of the term “stable storage device”. Applicants respectfully submit that this rejection is improper for dependent claims 6, 12, 13, and 17, as the term “stable storage device” does not appear in those dependent claims. Thus, Applicants address the usage of the term “stable storage device” only in claims 1-5, 7, 9-11, 14-16, and 19-20.

With regards to the term “stable storage device” as used in claims 1-5, 7, 9-11, 14-16, and 19-20, Applicants have amended claims 1-5, 7, 9-11, 14-16, and 19-20 to recite the term “non-volatile storage device” as suggested by the Examiner. In the specification, Applicants disclose that a stable storage device is:

[F]or example, a hard drive and includes a database of transaction data 125. In alternative embodiments of the invention, the stable storage device 115 is an external device to the transaction system 100 such as another computerized device, a file server, or any other type of stable storage device.

Specification, page 10 lines 8-11. Applicants respectfully submit that this disclosure describes a non-volatile storage device, and that use of the term "non-volatile" in place of the term "stable" does not constitute the addition of new matter.

The Examiner also rejected claim 3 for usage of the term "recent rate". Applicants have amended claim 3 to remove the word "recent". Applicants have also cleaned up the language of claim 3 so that it properly follows from claim 1, and in so doing have removed antecedent basis issues from claim 3.

The Examiner also rejected claims 3 and 4 for usage of the term "an average transaction". Applicants have amended the relevant limitations of claims 3 and 4 to read as follows:

determining an amount of data submitted by an average transaction to the data buffer by maintaining amounts of data for a specified number of recent transactions and averaging the maintained amounts of data;

Support for this amendment may be found in the specification at least at page 15 lines 2-5. Applicants believe this clarifies how an average transaction is determined.

The Examiner finally rejected claim 7 for usage of the phrase "the average data amount of data in the data buffer". Applicants have amended claim 7 to remove the extraneous word "data" from the phrase. Applicants made the change for both occurrences of the phrase in claim 7.

Applicants believe these changes are sufficient to overcome the rejection under 35 U.S.C. § 112 ¶ 2. Thus, with these changes, at least claims 1-7, 19 and 20 are allowable, and claims 11-17 are allowable if the rejection under 35 U.S.C. § 102(b) is overcome. This rejection is discussed below.

Claim Rejections – 35 U.S.C. § 102(b)

The Examiner rejected claims 9-10 and 18 under 35 U.S.C. § 102(b) as being anticipated by U.S. Published Patent Application No. 2002/0091722 to Gupta et al.

Applicants' amended independent claim 9 requires, among other things, a controller coupled to the interface, the non-volatile storage device and the memory, the controller configured to process the transactions, to write the processed transactions to

the data buffer, to flush the data buffer to the non-volatile storage device according to the system performance data from the system performance history, and to update the system performance history with data from the flush of the data buffer to the non-volatile storage device. The Examiner cites to elements 105, 110, and 145 of Fig. 1 of Gupta et al. as well as paragraphs 50 and 51 as disclosing this limitation.

However, neither the cited figure nor the cited text of Gupta et al. discloses a controller configured to flush the data buffer to the non-volatile storage device according to the system performance data from the system performance history, and to update the system performance history with data from the flush of the data buffer to the non-volatile storage device, as required by Applicants' amended independent claim 9. According to the Examiner, element 145 of Fig. 1 of Gupta et al. discloses system performance history, an assertion that seems to be supported by the text of paragraph 51 (" . . . an I/O capacity data table 145 that includes such information as the estimated average access delay and the average transfer rate per storage device type . . ."). Though Gupta et al. discloses in paragraph 52 that "I/O manager 140 may be configured to be capable of monitoring or tracking . . . average access delay ("AA"), average transfer rate ("TR") from the storage device(s) to the I/O controller", nowhere does Gupta et al. disclose that the storage management processing engine 105 (i.e., the controller) is configured to flush the data buffer (element 145) to the non-volatile storage device (element 110) according to those values, and to update those values with data from the flush of the data buffer to the non-volatile storage device, as required by Applicants' amended claim 9. Thus, Gupta et al. does not disclose Applicants' amended independent claim 9, and Applicants' amended independent claim 9 is allowable over Gupta et al.

Applicants' independent claim 18 includes limitations similar to those of Applicants' allowable amended independent claim 9 discussed above. Therefore, for at least the reasons given above with regards to Applicants' allowable amended independent claim 9, Applicants' independent claim 18 is itself allowable over Gupta et al.

Applicants' amended dependent claim 10 depends from Applicants' allowable amended independent claim 9. Therefore, for at least the reasons given above with regards to Applicants' allowable amended independent claim 9, Applicants' dependent claim 10 is itself allowable over Gupta et al.

CONCLUSION

Applicants believe this Amendment and Response to be fully responsive to the present Office Action. Thus, based on the foregoing Remarks, Applicants respectfully submit that this application is in condition for allowance. Accordingly, Applicants request allowance of the application.

Applicants hereby petition for any extension of time required to maintain the pendency of this case. If there is any fee occasioned by this response that is not paid, please charge any deficiency to Deposit Account No. 50-3735.

Should the enclosed papers or fees be considered incomplete, Applicants respectfully request that the Patent Office contact the undersigned collect at the telephone number provided below.

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Applicants invite the Examiner to contact the Applicants' undersigned Attorney if any issues are deemed to remain prior to allowance.

Respectfully submitted,



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